

Final Progress report

Proposal: GC06-012

Title: A drought monitoring and early warning system for the United States

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Figures

Figure 1

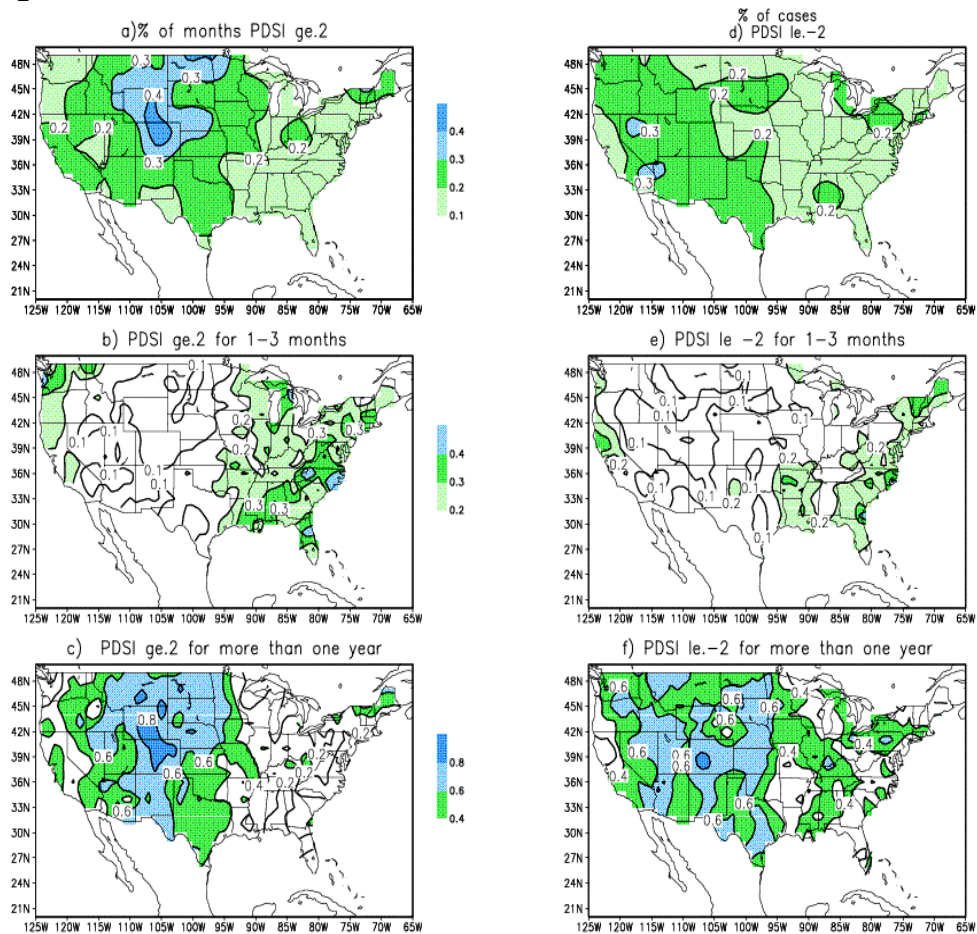


Fig.1 : (a) Ratio of the total number of months under wet spells (Palmer Drought Severity Index (PDSI) ≥ 2) to the record length from 1900 to 2004. Contour interval is 0.05. Values greater than 0.2 (0.3) are shaded according to the color bar, (b) same as (a), but for wet spells persist from 1- 3 months. Contour interval is 0.1. Values greater than 0.3 (0.4) are shaded light (dark), (c) same as (b), but for wet spells persist more than one year, (d)-(f) same as (a)-(c), but for droughts (PDSI ≤ -2).

Figure 2

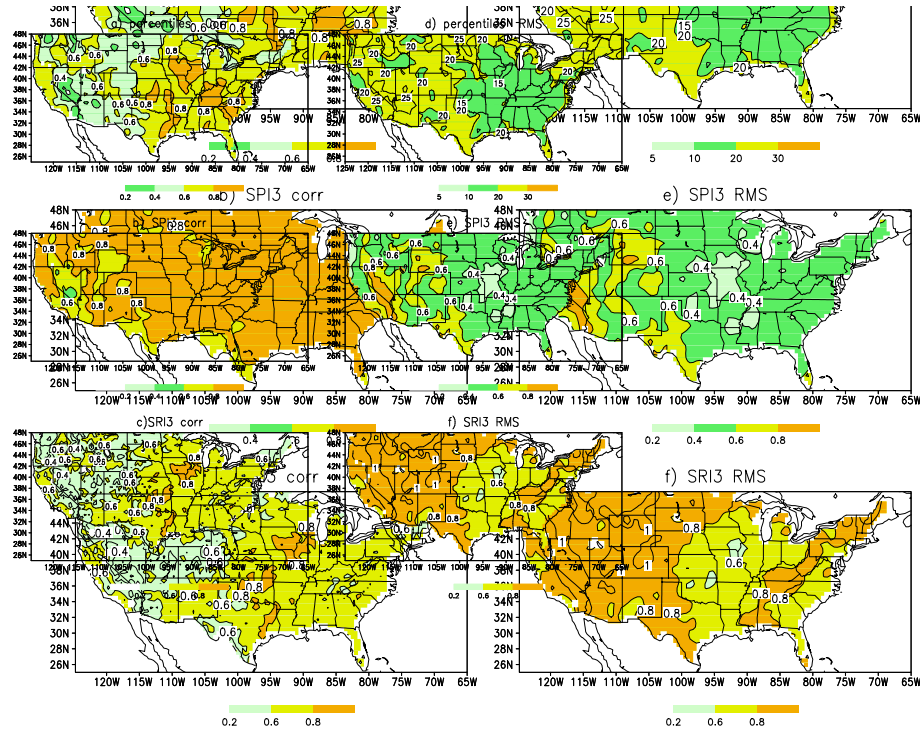


Fig. 2: (a) Correlation between SM percentiles based on VIC and Noah for the period 1952-2000. Contour interval is 0.2. (b) same as (a), but for 3-month SPI (SPI3). (c) same as (a), but for SRI3, (d) RMS difference for SM percentiles*100 between VIC and Noah. Contour interval is 5 % . Shading indicates that values are greater than 20%, (e) same as (d) but for SPI3. Contour interval is 0.2. and (f) same as (e), but for SRI3.

Figure 3

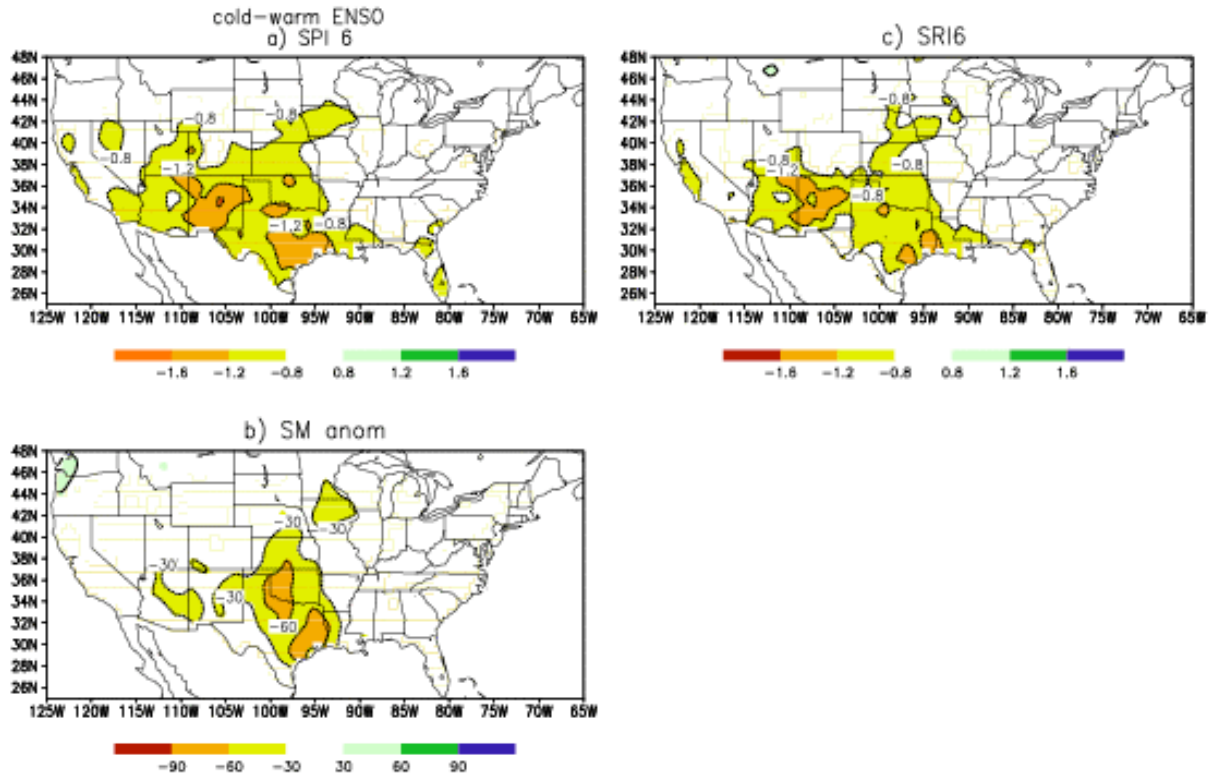


Fig.3: (a) Composite of SPI 6 for all seasons together between cold and warm ENSO events. Contour interval is 0.4 with values between -0.8 and 0.8 omitted. Areas where positive (negative) anomalies are statistically significant at the 5% level based on the Monte Carlo test are shaded according to the color bar, (b) same as (a), but the composite of soil moisture anomalies. Contour interval is 10 mm. Values between -10mm and 10mm are omitted, and (c) same as (a), but for SRI6.

Figure 4

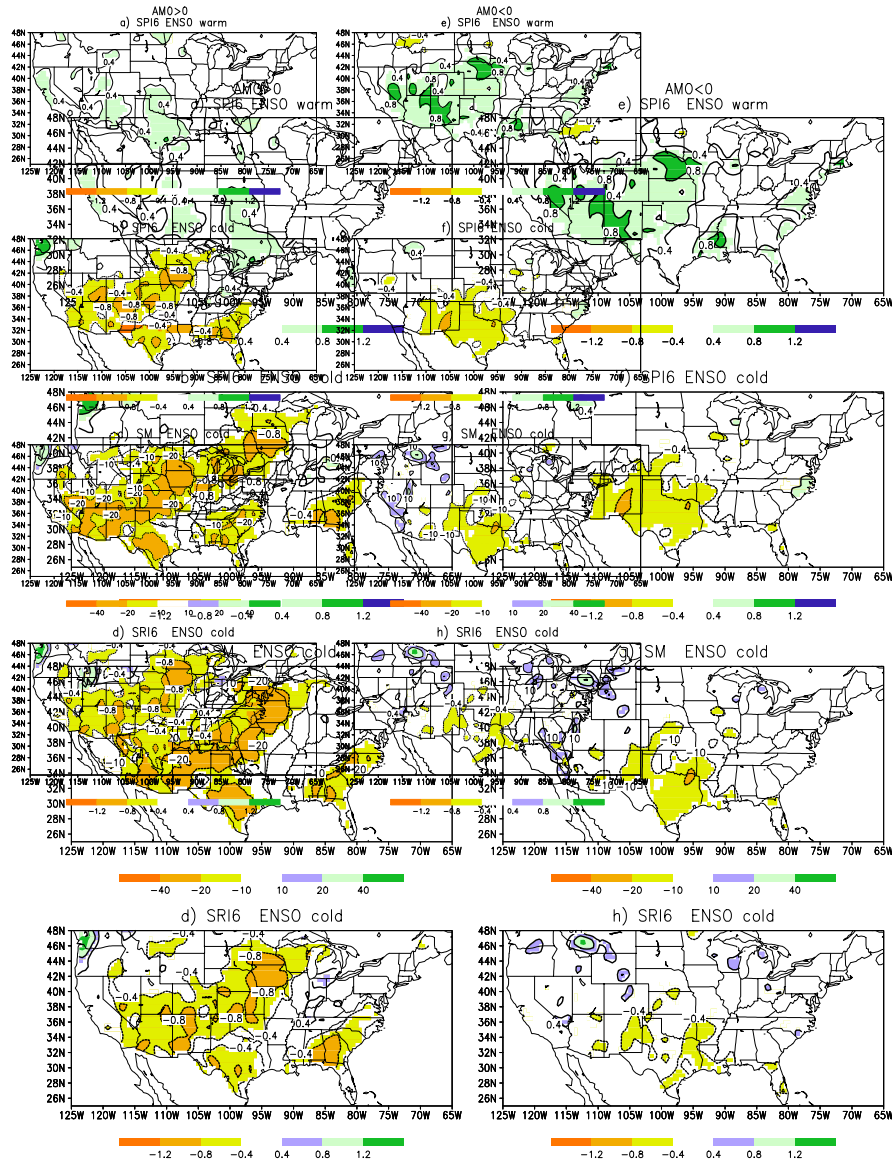


Fig.4: (a) Composite of SPI6 for warm ENSO during the positive phase of the AMO. Contour interval is 0.4 mm day⁻¹. Areas where positive (negative) anomalies are statistically significant at the 5% level based on the Monte Carlo test are shaded according to the color bar, (b) same as (a), but for cold ENSO, (c) same as (b), but for SM anomalies. Contour interval is 10 mm, (d) same as (b), but for SRI6, (e)-(h) same as (a)-(d), but for composites during the negative phase of the AMO.